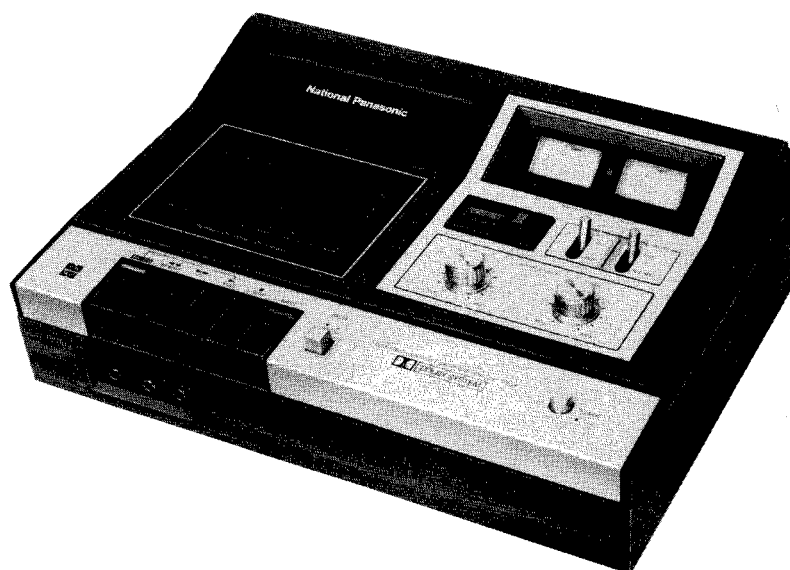


Service Manual

National
TAPE RECORDER
Panasonic

DOLBY* CASSETTE DECK WITH HI-FI FEATURES



RS-263US MECHANISM SERIES

MODEL **RS-269US**

SPECIFICATIONS (CATALOG SPECIFICATIONS FOR SALES)

Power Source:	AC: 90~109, 110~125, 200~219, 220~250 volts, 50/60Hz	Frequency Response:	30~12,000Hz (with normal tape) 30~13,000Hz (with CrO ₂ tape)
Power Consumption:	Approx. 8W	Signal to Noise Ratio:	Better than 49 dB (in normal operation) Better than 57 dB (in Dolby operation)
Motor:	Electronic speed control motor	Inputs:	2-MIC 0.3mV/applicable MIC impedance 200~600Ω
Transistors:	2SC1327(4), 2SC828(14), 2SC644(2) 2SC1347(3), 2SA666H(2), 2SK30AD(2)	2-LINE	30mV/220KΩ
Diodes:	OA90Z(6), SIB0102(2), EQA0108S(1) 1S1211(6)	Outputs:	2-LINE 0.42V/50KΩ 1-HEADPHONE 45mV/8Ω
Operation:	Push-button controls with auto-stop mechanism	Fast Forward and Rewind Time:	Approx. 90 seconds with C-60 cassette tape
Recording System:	AC bias 80 kHz	Dimensions:	355mm(W) × 116mm(H) × 244mm(D) 14"(W) × 4-5/8"(H) × 9-5/8"(D)
Erase System:	AC erase	Weight:	4.0 kg (8-7/8 lbs.)
Track System:	4-track, 2-channel stereo recording and playback		
Tape Speed:	1-7/8 ips.		
Wow and Flutter:	Less than 0.15%		

These specifications are subject to change in order to accommodate improvements in design.

Matsushita Electric
Matsushita Electric Trading Co., Ltd.
P. O. Box 288, Central Osaka, Japan



LOCATION OF PARTS

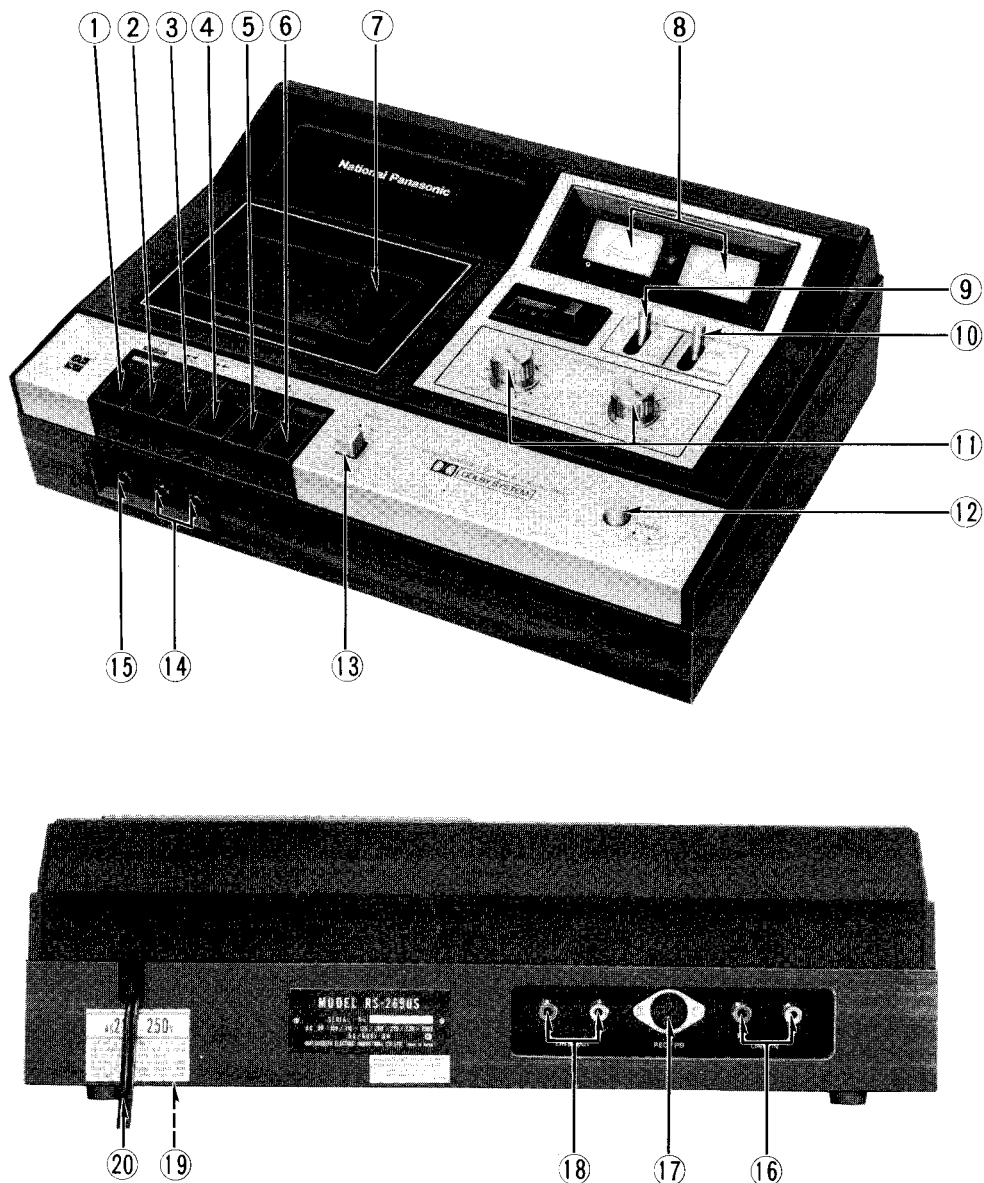


Fig. 1

- | | |
|-----------------------|-------------------------------------|
| ① Record button | ⑪ Record level controls |
| ② Rewind button | ⑫ Power switch |
| ③ Fast forward button | ⑬ Pause switch |
| ④ Play button | ⑭ Microphone jacks |
| ⑤ Stop button | ⑮ Headphone jack |
| ⑥ Eject button | ⑯ Line in jacks |
| ⑦ Cassette cover | ⑰ Record/playback connection socket |
| ⑧ Level meters | ⑱ Line out jacks |
| ⑨ Dolby NR switch | ⑲ AC voltage select switch (bottom) |
| ⑩ Tape select switch | ⑳ AC cord |

DISASSEMBLY INSTRUCTIONS

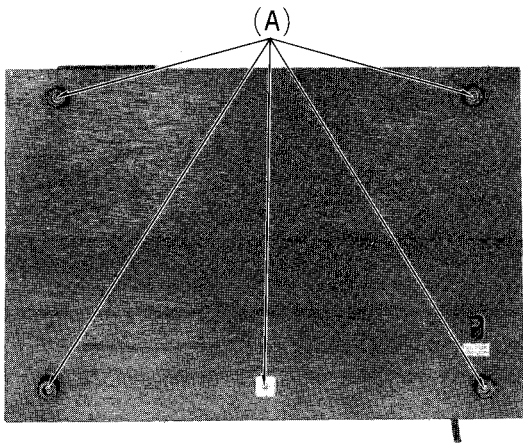


Fig. 2 A: $\oplus 3 \times 12$

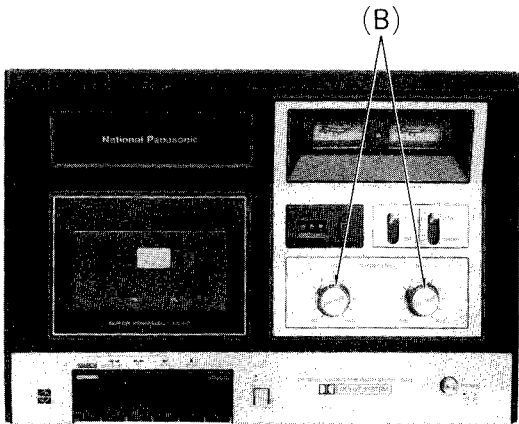


Fig. 3

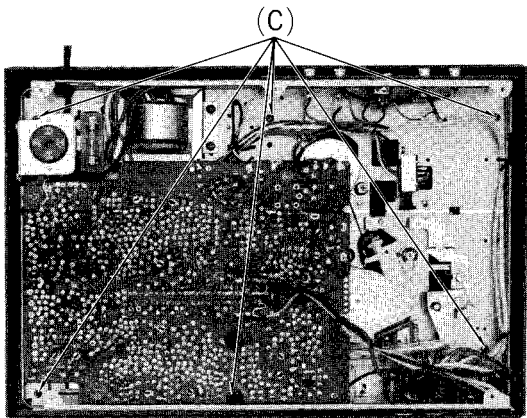


Fig. 4 C: $\oplus 3 \times 8$ (Red)

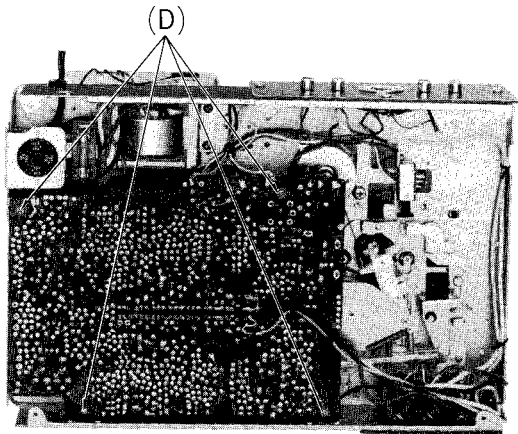


Fig. 5 D: $\oplus 3 \times 8$

Procedure	To remove —	Remove —	Pcs.	Shown in fig. —
1	Bottom case	(A)	(5)	2
2	Chassis	(B), (C)	(2), (6)	3, 4
3	Amplifier	(D)	(4)	5

ADJUSTMENTS

HEAD AZIMUTH ADJUSTMENT

1. Playing the test tape (C-AA), adjust the head azimuth adjust screw (A) shown in fig. 6 for maximum balanced output.
2. After adjustment, lock it with lacquer.

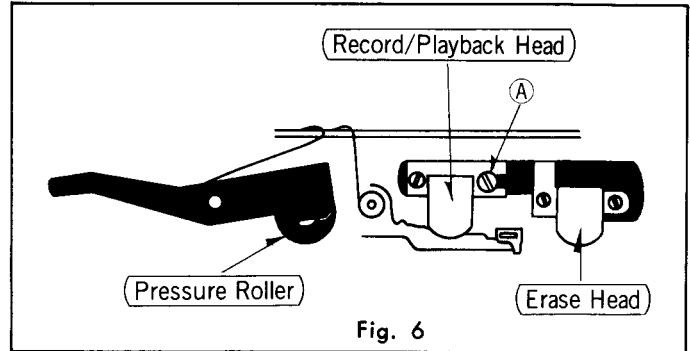


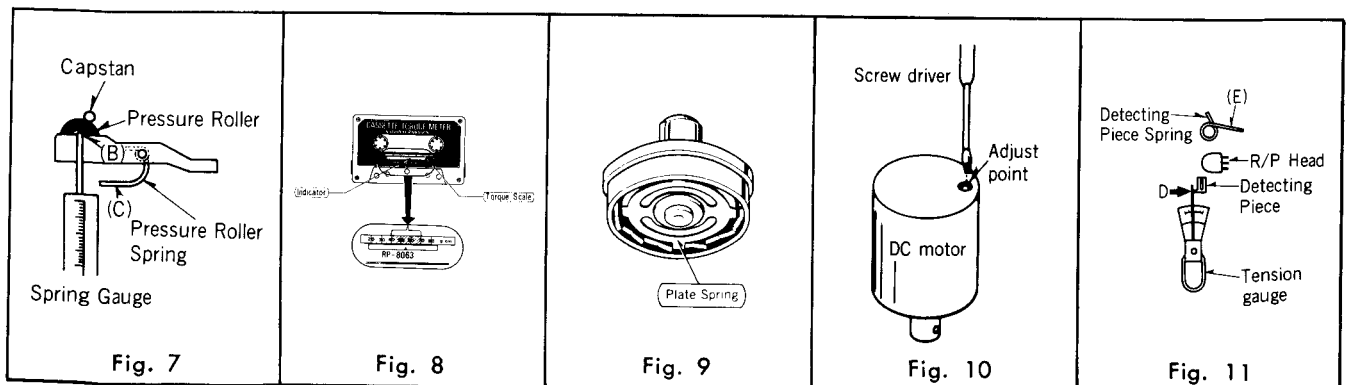
Fig. 6

MECHANICAL ADJUSTMENT

Instruments

- Tension gauge (0~100 g)
- Spring gauge (0~500 g)
- Cassette torque meter
- Test tape (C-WAT 3000Hz)
- Mode: Playback

ITEM	MEASUREMENT METHOD	SPEC.	ADJUSTMENT METHOD	REMARKS
Pressure roller.	Hook tension gauge to pressure roller shaft top (B), and pull gauge as shown in fig. 7.	370 ± 70 gr	Adjust by bending the part (C) of the pressure roller spring.	Value is indicated when the pressure roller moves away from the capstan.
Takeup tension.	Mount the cassette torque meter in the same way as the cassette tape, and set in playback mode. The takeup tension is shown as in fig. 8.	55 ± 15 gr	Turn the plate spring attached in the reel table. See fig. 9.	—
Tape speed.	Play test tape (C-WAT) and supply playback signal to frequency counter.	3000Hz ± 3%	See fig. 10.	Take measurement at middle section tape.
Wow and flutter.	Play test tape (C-WAT) and supply playback signal to wow and flutter meter.	0.2% WRMS	—	—
Auto stop detecting piece tension.	Press part (D) of the detecting piece in a straight line in the direction of the arrow as shown in fig. 11.	50 ± 10 gr	Adjust by bending the part (E) of the detecting piece spring.	—



AMPLIFIER ADJUSTMENT

NOTE:

1. Make sure heads are clean.
2. Make sure capstan and pressure roller are clean.
3. Record level control VR: MAX
4. Tape select switch: NORMAL
5. Dolby NR switch: OUT

	ITEM	SIGNAL SOURCE CONNECTION	OUTPUT CONNECTION	MODE	ADJUSTMENT	SPEC.	REMARKS
1	Playback frequency response.	Playback the test tape (C-FH).	VTVM to LINE OUT jack.	Playback	L: VR1 R: VR2	See fig. 12.	—
2	Playback gain.	Same as above.	Same as above.	Playback	L: VR3 R: VR4	0.42 ± 0.04 V	The frequency of test tape is 333Hz.
3	Erase current.	—	VTVM to TP3. See fig. 13.	Record	—	Greater than 13 V (CrO ₂ : Greater than 15 V)	—
4	Bias oscillation frequency.	—	Frequency counter to TP3. See fig. 14.	Record	—	80 ± 7 kHz	—
5	Record bias current.	—	VTVM to TP1 (L-CH). TP2 (R-CH). See fig. 15.	Record	L: L5 R: L6	5.5 ± 1 mV (CrO ₂ : 6.3 ± 1 mV)	—
6	Bias trap.	—	VTVM to LINE OUT jack.	Record	L: L1 R: L2	minimum	—
7	Level meter.	Supply 1 kHz signal to LINE IN jack.	VTVM to LINE OUT jack.	Record	L: VR13 R: VR14	0 VU on VU meter.	At 0.42 V of LINE OUT.

OVERALL GAIN ADJUSTMENT

NOTE: Use the test tape (C-RA) for Normal position, C-RF for CrO₂ position.

1. Test equipment connection is shown in fig. 18.
2. Set tape select switch to CrO₂ position.
3. Place the unit into record mode.
4. Supply 1 kHz signal (−30 dB) from AF oscillator, through ATT, to LINE IN.
5. Adjust ATT until monitor level at LINE OUT becomes 0.42 V.
6. Make recording.
7. Playback the recorded tape, and make sure the value at LINE OUT becomes 0.42 V.
8. If measured value is not 0.42 V, adjust VR11 (L-CH), VR12 (R-CH).
9. Repeat from step 2.
10. Set tape select switch to NORMAL position and repeat from step 1 to step 7.
11. If measured value is greater than 0.5 V, change the short circuit point from 1 to 2, and less than 0.35 V, make short circuit by both 1 and 2 (Refer to adjustment parts location).

OVERALL FREQUENCY RESPONSE ADJUSTMENT

NOTE: Use the test tape (C-RA) for NORMAL position, C-RF for CrO₂ position.

1. Test equipment connection is shown in fig. 18.
2. From the LINE IN, supply signal 20 dB lower than the level at which the level meter indicates 0 VU (0 VU=standard recording level).
3. Vary oscillator frequency and record 40Hz~10kHz.
4. Play the recorded tape, read output at each frequency on the VTVM and make sure that the measured value is within the range specified in the frequency response chart (See figs. 16 and 17).
5. If the value is outside the range, adjust L5 (L-CH), L6 (R-CH). When the value is outside the high-frequency range only (at 10 kHz), adjust L7 (L-CH), L8 (R-CH).
6. If the frequency response cannot be made satisfactory by adjusting above, readjust playback frequency response and the head azimuth and check each circuit.

Playback Frequency Response Chart

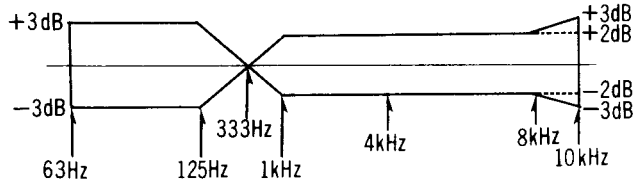


Fig. 12

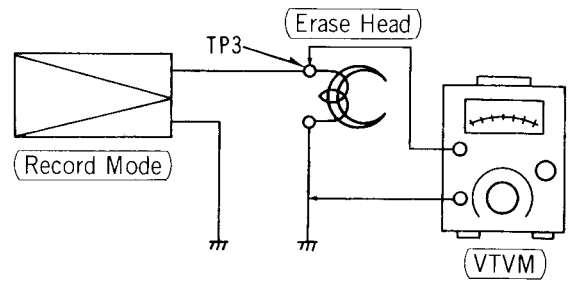


Fig. 13

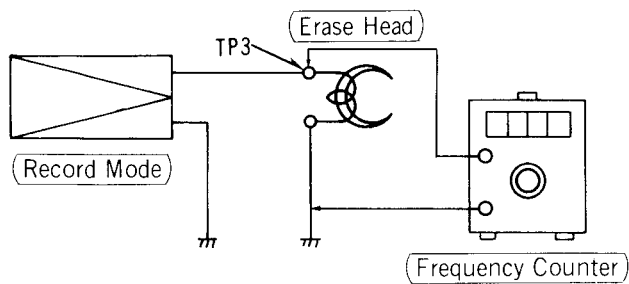


Fig. 14

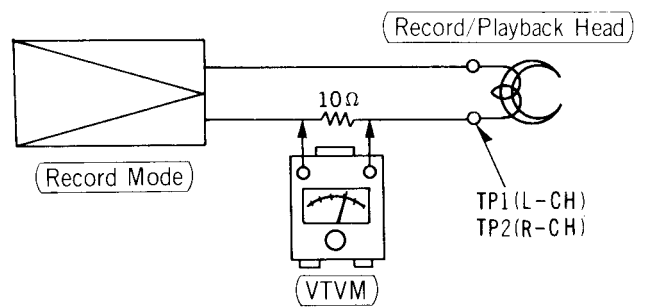


Fig. 15

Overall Frequency Response Chart (NORMAL)

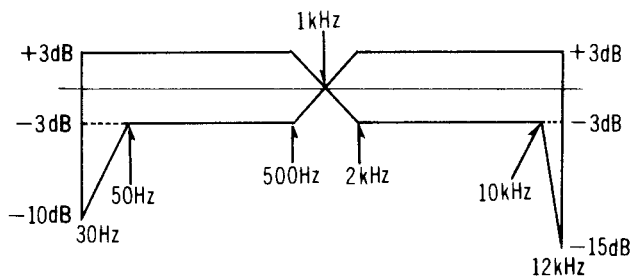


Fig. 16

Overall Frequency Response Chart (CrO₂)

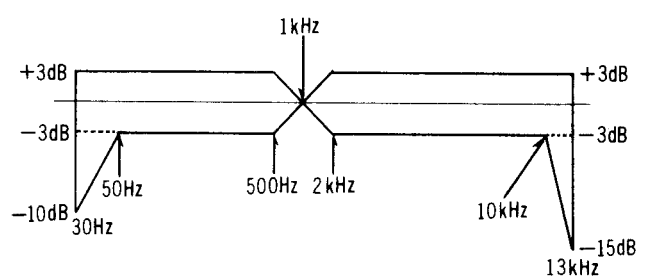


Fig. 17

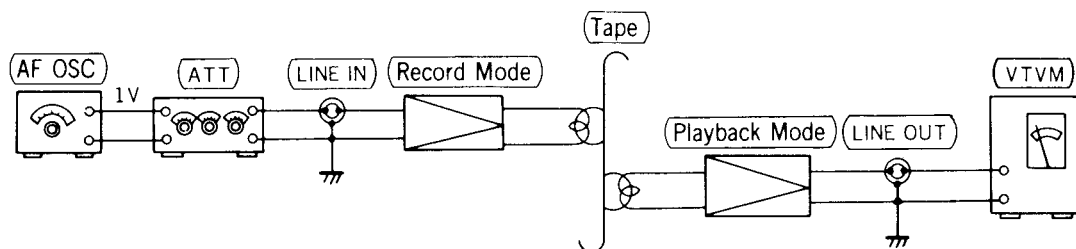


Fig. 18

DOLBY NR CIRCUIT ADJUSTMENT

- 1. Place the set into the recording mode, set the DOLBY NR switch to OUT position and supply input to LINE IN jack to obtain -35dB at TP4 (L-CH), and TP5 (R-CH). (frequency 5kHz)
- 2. Confirm that the value at IN position is 8dB greater than at OUT position of DOLBY NR switch.
- 3. When it is not in condition above, adjust as follows.
- 4. Set VR7, VR8, VR9 and VR10 to maximum.
- 5. Set the DOLBY NR switch to IN position.
- 6. Adjusting VR9 (L-CH) and VR10 (R-CH), make the reading of VTVM at TP4 (L-CH) and TP5 (R-CH) become -25dB (10dB greater than the value in 1 above).
- 7. Adjusting VR7 (L-CH) and VR8 (R-CH), make the reading of VTVM at TP4 (L-CH) and TP5 (R-CH) become -27dB (2dB smaller than the value obtained through the adjustment in 6 above).

ADJUST PARTS LOCATION

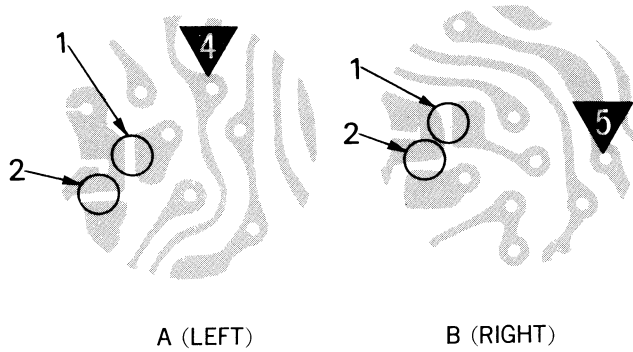
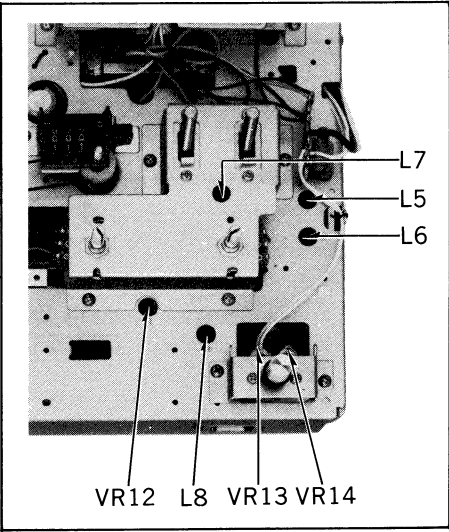
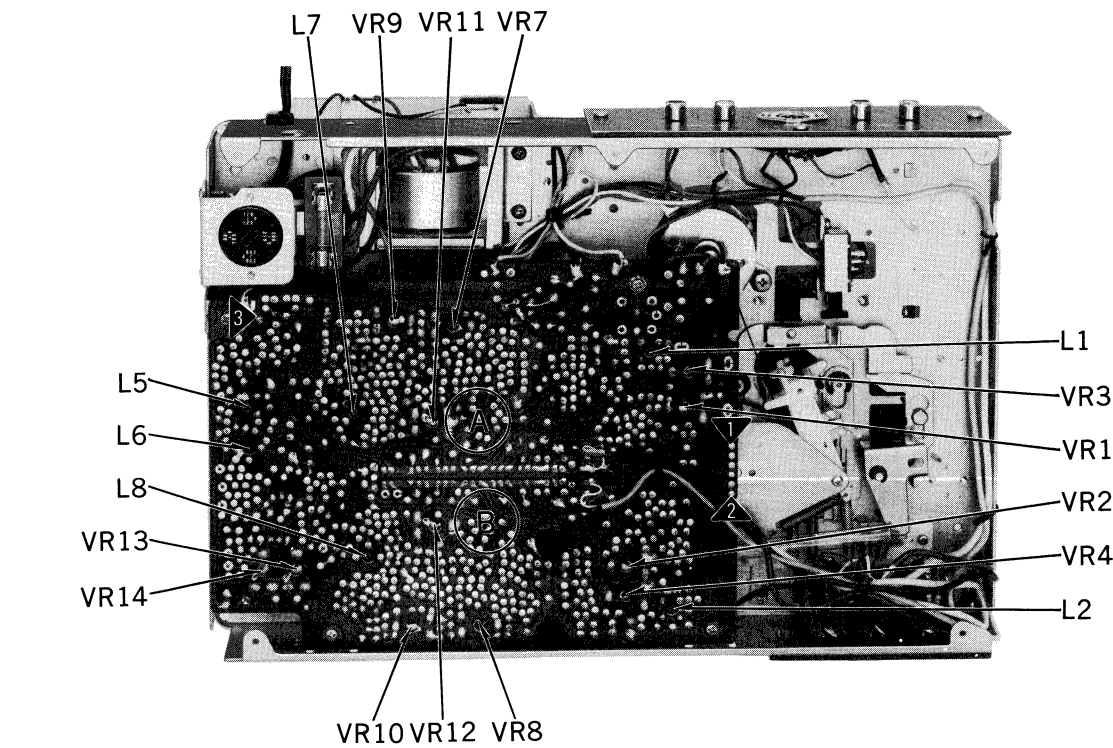
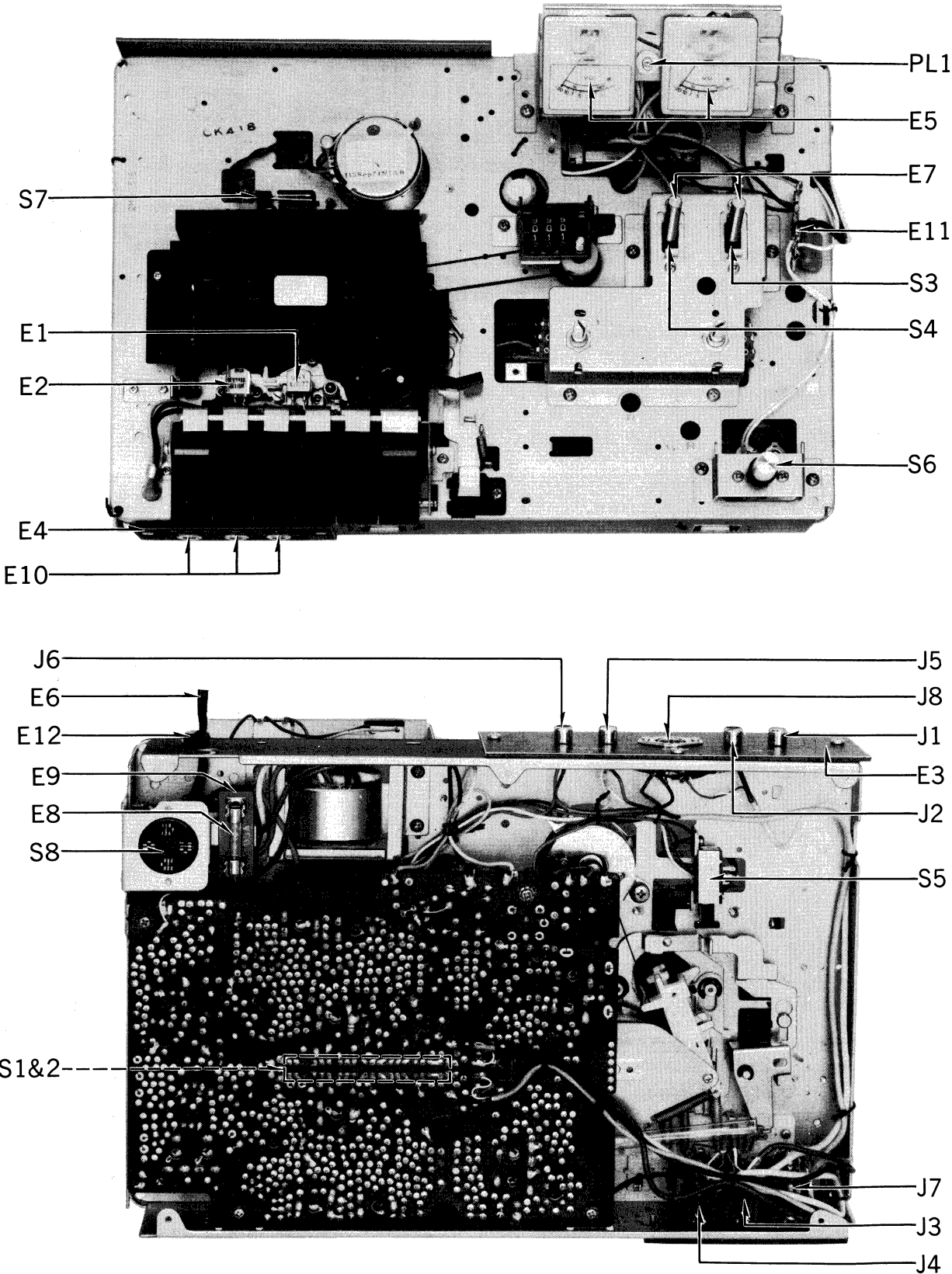


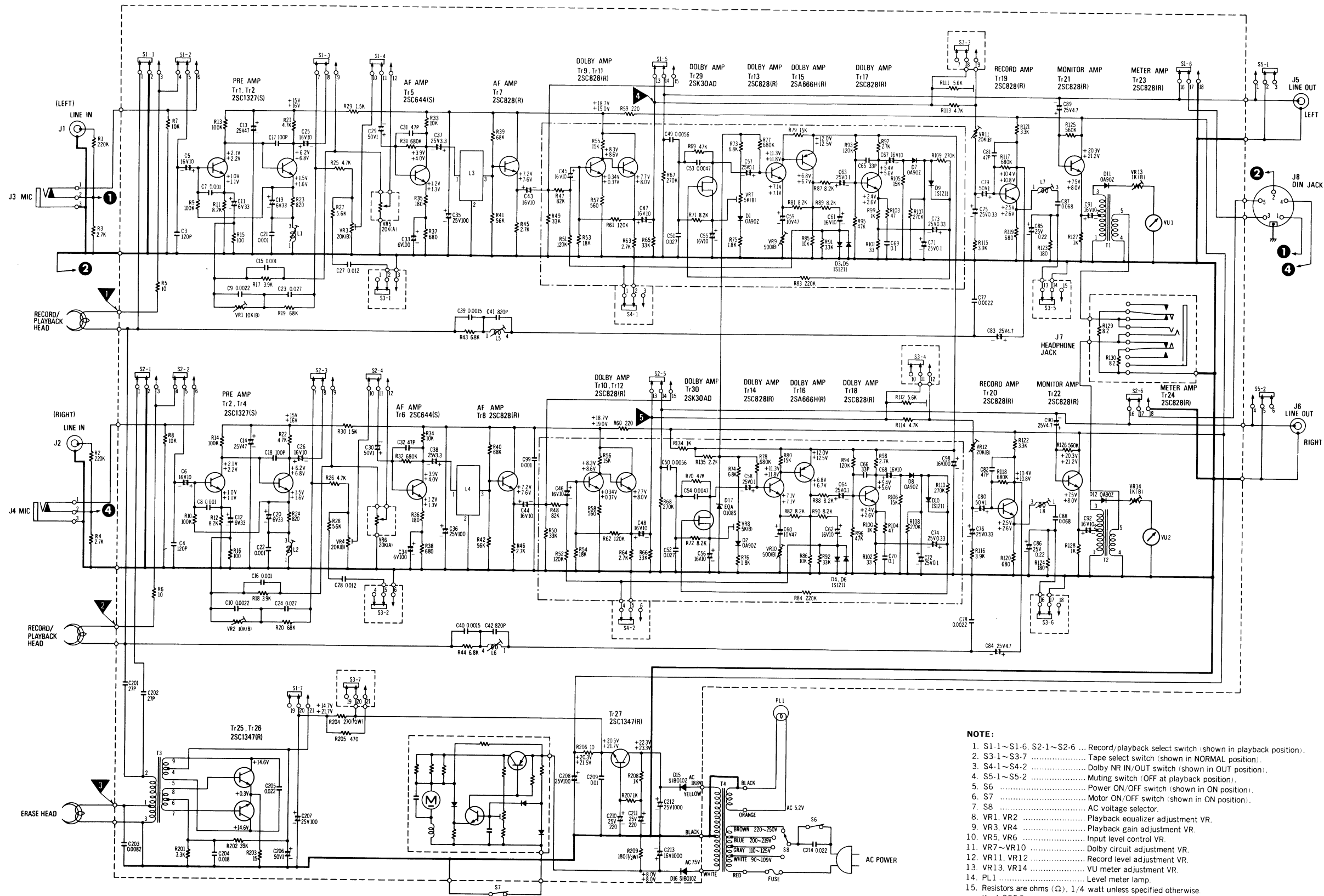
Fig. 19

* Dolby is the trade mark of Dolby Laboratories Inc.

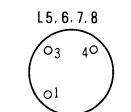
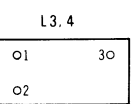
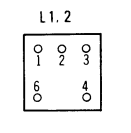
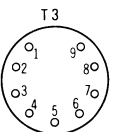
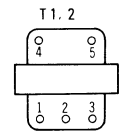
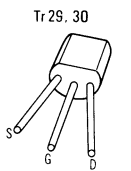
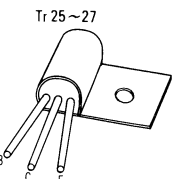
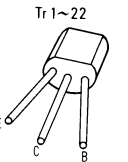
ELECTRICAL PARTS LOCATION



SCHEMATIC DIAGRAM MODEL RS-269US



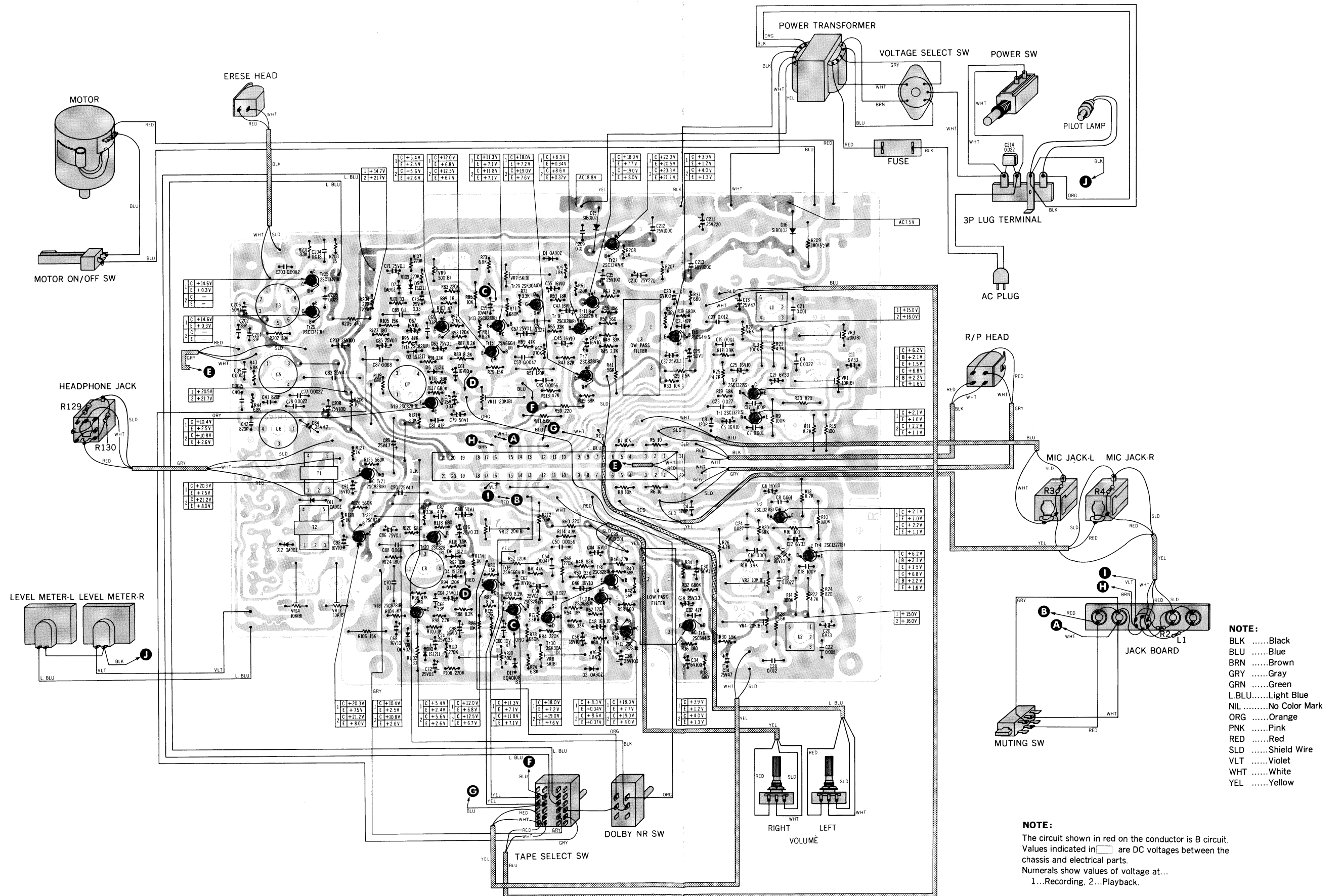
TERMINATIONS (BOTTOM VIEW)



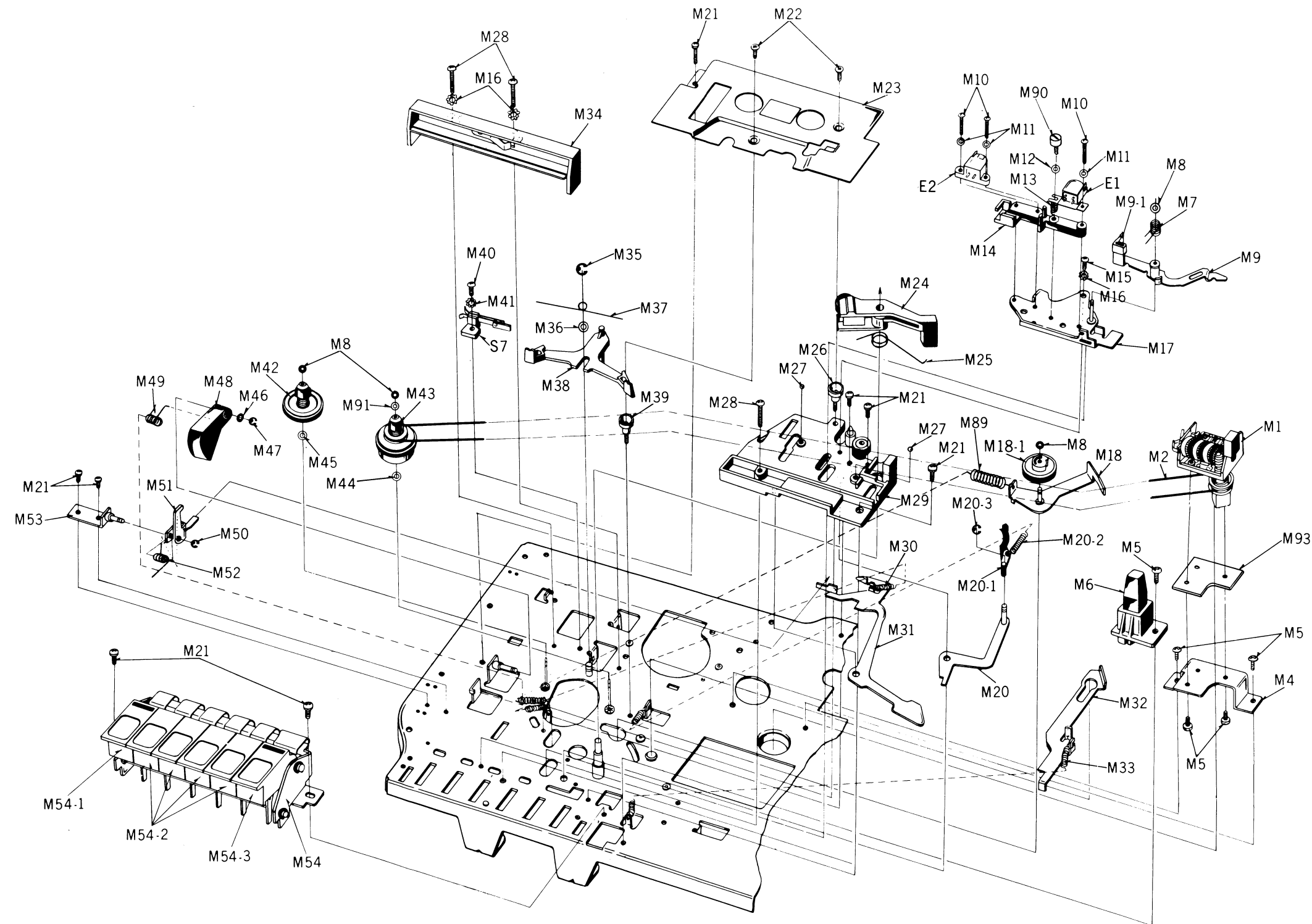
NOTE:

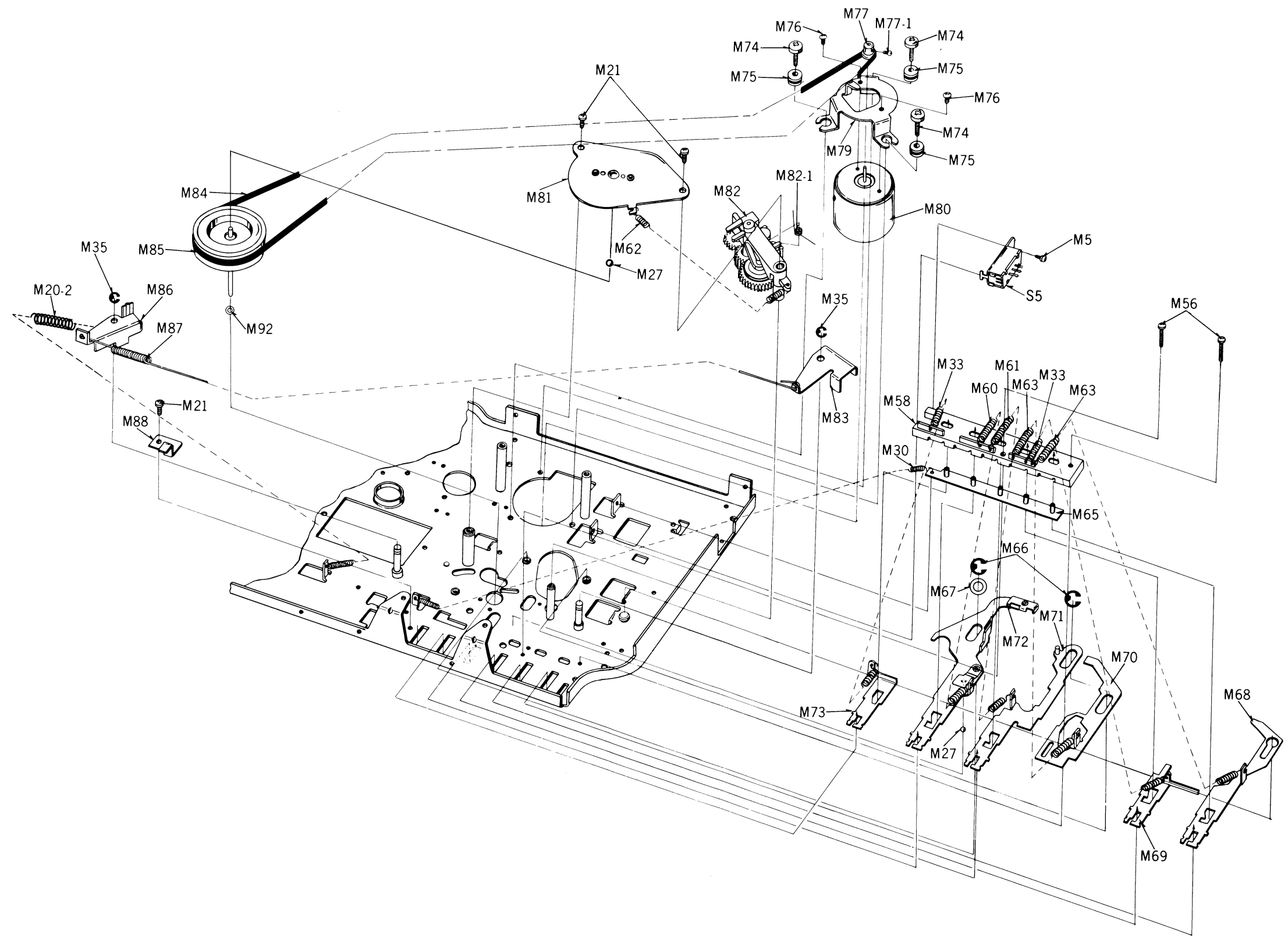
- S1-1 ~ S1-6, S2-1 ~ S2-6 ... Record/playback select switch (shown in playback position).
- S3-1 ~ S3-7 ... Tape select switch (shown in NORMAL position).
- S4-1 ~ S4-2 ... Dolby NR IN/OUT switch (shown in OUT position).
- S5-1 ~ S5-2 ... Muting switch (OFF at playback position).
- S6 ... Power ON/OFF switch (shown in ON position).
- S7 ... Motor ON/OFF switch (shown in ON position).
- S8 ... AC voltage selector.
- VR1, VR2 ... Playback equalizer adjustment VR.
- VR3, VR4 ... Playback gain adjustment VR.
- VR5, VR6 ... Input level control VR.
- VR7 ~ VR10 ... Dolby circuit adjustment VR.
- VR11, VR12 ... Record level adjustment VR.
- VR13, VR14 ... VU meter adjustment VR.
- PL1 ... Level meter lamp.
- Resistors are ohms (Ω), 1/4 watt unless specified otherwise. K = 1,000 Ω .
- Capacitors are microfarads (μ F) unless specified otherwise. P = pico-farads.
- The mark (\blacktriangledown) shows test point. e.g. \blacktriangledown test point 1.
- All measurements are under no signal conditions with volume at minimum position. Use VTVM for voltage measurements. The upper values should be measured during recording and the lower values during playback.

WIRING CONNECTION DIAGRAM MODEL RS-269US

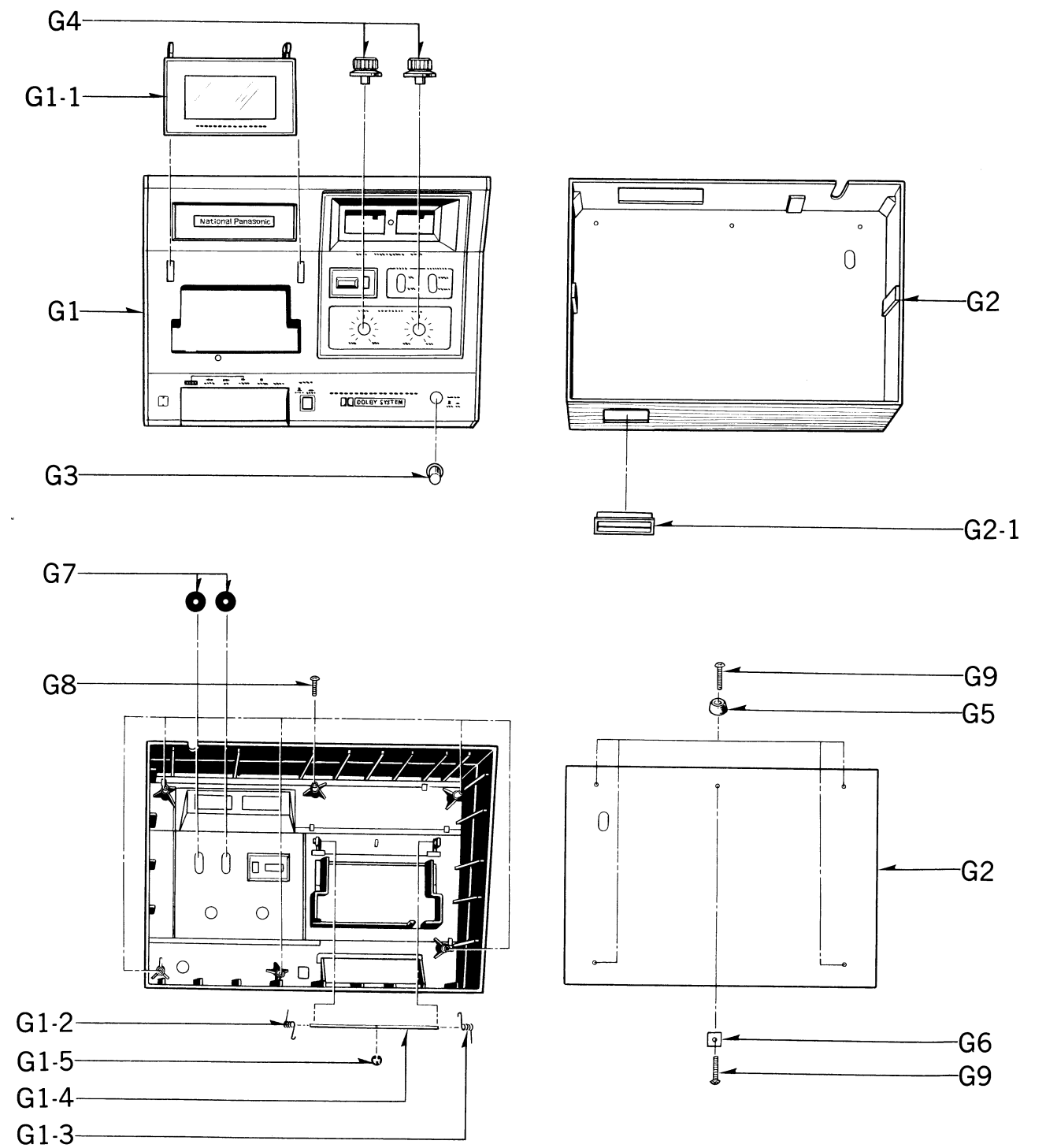


EXPLODED VIEWS





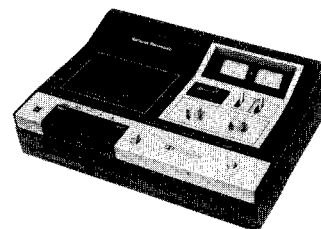
CABINET PARTS



REPLACEMENT PARTS LIST

MODEL RS-269US

National Panasonic



RS-269US

NOTE:

1. Be sure to make your orders of replacement parts according to this list.
2. "N" in "Remarks" column indicates new parts.
3. "K" indicates the serrated parts with 18 notches.

NOTA:

1. Habrá que asegurarse que los pedidos de piezas de repuesto se hagan según esta lista.
2. "N" marcado en la columna "Remarks", quiere decir que las piezas son nuevas.
3. "K" indica las partes dentadas con 18 ranuras.

NOTE:

1. Bien s'assutet de se conformer à la liste suivante pour les commandes de pièces de rechange.
2. "N", dans la colonne "Remarks", indique les pièces nouvelles.
3. "K" indique les pièces cannelées à 18 crans.

HINWEIS:

1. Bestellen Sie Ihre Ersatzteile genau nach dieser Liste.
2. "N" in der "Remarks" Spalte bedeutet "neue Teile".
3. "K" bezeichnet die gezähnten Teile mit 18 Zähnen.

按:

1. 關於代用零件之訂購，務請依照此表而行之為荷。
2. 「備考」(Remarks) 一欄中之 "N" 形符號標記表示該零件為新出品。
3. "K" 形符號標記表示備有18個凹槽的鋸齒狀零件。

Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
	<u>MECHANICAL PARTS</u>					
M1	Memory Tape Counter	QDC0078S	1			N
M2	Counter Belt	QDB0124	1			RS-263US
M4	Counter Angle	QMAM005	1			”
M5	Screw $\oplus 3 \times 5$	XYN3+C6FXS	6			COMMON
M6	Pause Switch Assembly	QXQM002B	1			N
M7	Auto Stop Detecting Lever Spring	QBN1188	1			RS-263US
M8	Snap Washer	QWQ1124	4			”
M9	Detecting Lever Assembly	QXL0482	1			RS-610US
M9-1	Detecting Piece	QBJ1538	1			RS-263US
M10	Screw $\ominus 2 \times 12$	XSN2-12FX	3			COMMON
M11	Spring Washer 2ϕ	XWA2B	3			”
M12	Washer 2ϕ	XWE2	1			”
M13	Head Spring	QBC1103A	1			RS-610US
M14	Head Spacer	QBJM003	1			RS-263US
M15	Screw $\oplus 2.6 \times 6$	XSN26+6FX	1			COMMON
M16	Lock Washer 2.6ϕ	XWC26B	3			”
M17	Head Base Plate Unit	QXK1243	1			RS-263US
M18	Idler Lever Assembly	QXLM008	1			N
M18-1	Idler	QXI0050	1			RS-263US
M20	Auto Stop Drive Lever Assembly	QXL0568	1			”
M20-1	Auto Stop Drive Pawl	QBJ1656	1			”
M20-2	Auto Stop Spring	QBT1489M	2			”
M20-3	Stop Ring 2.5ϕ	XUC25FK	1			COMMON
M21	Sems Screw $\oplus 2.6 \times 6$	XYN26+C6FX	11			”
M22	Screw $\oplus 2.6 \times 5$	XSS26+5KFX	2			RS-263US
M23	Mechanism Panel Ornament	QMFM001	1			”
M24	Pressure Roller Lever Assembly ✓	QXLM010	1			”
M25	Pressure Roller Spring	QBN1157	1			”
M26	Pole-A	QMSM008	1			”
M27	Steel Ball 2.5ϕ	QDK1012	4			”
M28	Screw $\oplus 2.6 \times 10$	XSN26+10FX	3			COMMON
M29	Upper Base Assembly	QXK1293	1			RS-263US
M30	Lock Plate Spring	QBT1521	2			”

RS-269US

Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
M31	Eject Lever	QMLM012	1			RS-263US
M32	Pause Lever	QMLM010	1			”
M33	Stop Lever Spring	QBT1580M	3			RQ-447FJS
M34	Cassette Retainer Assembly	QXQ0061	1			RS-263US
M35	Stop Ring 3φ	XUC3FK	3			COMMON
M36	Fiber Washer 4.2×9×0.5t	QBK7005	1			RS-263US
M37	Brake Spring	QBN1088	1			”
M38	Brake	QBJ2097	1			”
M39	Pole-B	QMSM009	1			”
M40	Screw ⊕2×5	XSN2+5FX	1			COMMON
M41	Lock Washer 2φ	XWC2B	1			”
M42	Supply Reel Table Assembly	QXP0320	1			”
M43	Takeup Reel Table Assembly	QXP0395	1			”
M44	Snap Washer	QBJ3220	1			”
M45	Washer	QBFM0005	1			RS-610US
M46	Fiber Washer 3.2×6×0.25 t	QBK7122A	1			Ⓝ
M47	Stop Ring 1.5φ	XUC15FK	1			COMMON
M48	Cassette Up	QBJM0015	1			Ⓝ
M49	Cassette Up Spring	QBNM0006	1			RS-610US
M50	Stop Ring 2φ	XUC2FK	1			COMMON
M51	Lid Hook Plate	QML2842	1			Ⓝ
M52	Lid Hook Plate Spring	QBN1454	1			Ⓝ
M53	Hook Plate Holder Unit	QXA0418	1			Ⓝ
M54	Operation Button Assembly	QXBM006	1			RS-263US
M54-1	Push Button-R (Recrd)	QBJM012	1			Ⓝ
M54-2	Push Button (Play, Stop, FF, REW)	QBJM006	4			Ⓝ
M54-3	Push Button-E (Eject)	QBJM011	1			Ⓝ
M56	Sems Screw ⊕2.6×10	XYN26+C10FX	2			COMMON
M58	Lever Guide	QGG0017	1			Ⓝ
M60	Playback Lever Spring	QBT1536M	1			RS-263US
M61	Fast Forward Lever Spring-A	QBT1484M	1			”
M62	Fast Forward Lever Spring-B	QBT1485M	1			”
M63	Record Lever Spring	QBT1486M	2			”
M65	Lock Plate Unit	QXH0096	1			”
M66	Stop Ring 5φ	XUC5FK	2			COMMON

RS-269US

Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
M67	Fiber Washer 6.2×11×1t	QBK7130	1			RS-263US
M68	Record Lever	QMLM0026	1			N
M69	Rewind Lever	QML1953	1			RS-610US
M70	Fast Forward Lever-B	QMR1307	1			”
M71	Fast Forward Lever Unit	QXLM0011	1			”
M72	Playback Lever Unit	QXRM0002	1			”
M73	Stop Lever	QML1954	1			RS-263US
M74	Screw	QMS1833	3			”
M75	Motor Rubber Cushion	QBG1055A	3			”
M76	Screw ⊕2.6×3	XSN26+3FX	2			COMMON
M77	Motor Pulley	QXP0494	1			N
M77-1	Motor Pulley Set Screw	XSN26+3FX	1			COMMON
M79	Motor Holding Angle	QMA1681	1			RS-263US
M80	Motor	QDM0980XPAB	1			RS-610US
M81	Flywheel Retainer Unit	QXH0095A	1			N
M82	Fast Forward Frame Assembly	QXG1014C	1			RS-610US
M82-1	Gear Lever Spring	QBN1447	1			RS-263US
M83	Record/Playback Lever	QMLM006	1			”
M84	Flywheel Belt	QDB0141	1			”
M85	Flywheel Assembly	QXF0063	1			”
M86	Record/Playback Lever-B	QMLM0030	1			N
M87	Record/Playback Wire	QBTM0004	1			N
M88	Lever Guide Holding Metal	QMA1697	1			RS-263US
M89	Idler Spring	QBT1558M	1			RS-610US
M90	Head Azimuth Adjust Screw	QHQ1199				”
M91	Poly Washer 2.9×4×0.5 t	QBW2013	1			N
M92	Snap Washer	QBJ3221	1			RQ-309SN
M93	Counter Spacer	QBKM0022	1			N
	<u>RESISTORS</u>					
R1, 2, 83, 84	Carbon Resistor 220 KΩ 1/4 W	ERD14VJ224	4			
R3, 4, 45, 46, 63, 64, 97, 98	” 2.7 KΩ 1/4 W	ERD14VJ272	8			
R5, 6, 206	” 10Ω 1/4 W	ERD14VJ100	3			
R7, 8, 33, 34, 85, 86	” 10 KΩ 1/4 W	ERD14VJ103	6			
R9, 10, 13, 14	” 100 KΩ 1/4 W	ERD14VJ104	4			

Ref. No.	Description		Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
R11,12,81,82, 87,88,89,90	Carbon Resistor	8.2 K Ω 1/4 W	ERD14VJ822	8			
R15, 16	"	100 Ω 1/4 W	ERD14VJ101	2			
R17, 18, 115, 116	"	3.9 K Ω 1/4 W	ERD14VJ392	4			
R19, 20, 39, 40	"	68 K Ω 1/4 W	ERD14VJ683	4			
R21, 22, 25, 26, 113, 114	"	4.7 K Ω 1/4 W	ERD14VJ472	6			
R23, 24	"	820 Ω 1/4 W	ERD14VJ821	2			
R27, 28, 111, 112	"	5.6 K Ω 1/4 W	ERD14VJ562	4			
R29, 30	"	1.5 K Ω 1/4 W	ERD14VJ152	2			
R31, 32, 77, 78, 117, 118	"	680 K Ω 1/4 W	ERD14VJ684	6			
R35, 36, 123, 124	"	180 Ω 1/4 W	ERD14VJ181	4			
R37, 38, 119, 120	"	680 Ω 1/4 W	ERD14VJ681	4			
R41, 42	"	56 K Ω 1/4 W	ERD14VJ563	2			
R43, 44, 73, 74	"	6.8 K Ω 1/4 W	ERD14VJ682	4			
R47, 48	"	82 K Ω 1/4 W	ERD14VJ823	2			
R49, 50, 65, 66, 91, 92	"	33 K Ω 1/4 W	ERD14VJ333	6			
R51, 52, 61, 62, 93, 94	"	120 K Ω 1/4 W	ERD14VJ124	6			
R53, 54	"	18 K Ω 1/4 W	ERD14VJ183	2			
R55, 56, 79, 80, 105, 106	"	15 K Ω 1/4 W	ERD14VJ153	6			
R57, 58	"	560 Ω 1/4 W	ERD14VJ561	2			
R59, 60	"	220 Ω 1/4 W	ERD14VJ221	2			
R67, 68, 107, 108, 109, 110	"	270 K Ω 1/4 W	ERD14VJ274	6			
R69, 70, 95, 96	"	47 K Ω 1/4 W	ERD14VJ473	4			
R71, 72, 121, 122, 201	"	3.3 K Ω 1/4 W	ERD14VJ332	5			
R75, 76	"	1.8 K Ω 1/4 W	ERD14VJ182	2			
R99, 100, 127, 128, 134, 207, 208							
	"	1 K Ω 1/4 W	ERD14VJ102	7			
R101, 102	"	33 Ω 1/4 W	ERD14VJ330	2			
R103, 104	"	47 Ω 1/4 W	ERD14VJ470	2			
R125, 126	"	560 K Ω 1/4 W	ERD14VJ564	2			
R129, 130	"	8.2 Ω 1/4 W	ERD14VJ8R2	2			
R135	"	2.2 K Ω 1/4 W	ERD14VJ222	1			
R202	"	39 K Ω 1/4 W	ERD14VJ393	1			
R203	"	15 Ω 1/4 W	ERD14VJ150	1			
R204	Solid Resistor	270 Ω 1/2 W	ERC12GK271	1			
R205	Carbon Resistor	470 Ω 1/4 W	ERD14VJ471	1			

Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
R209	Solid Resistor 180Ω 1/2 W	ERC12GK181	1			
	<u>VARIABLE RESISTORS</u>					
VR1, 2	Semi-fixed Variable Resistor (Playback EQ. Adjust) 10 KΩ (B)	EVLS3AA00B14	2			RS-768US
VR3, 4	Semi-fixed Variable Resistor (Playback Gain Adjust.) 20 KΩ (B)	EVLS3AA00B24	2			RS-610US
VR5, 6	Variable Resistor (Input Level Control) 20 KΩ (A)	EVCB0AK25A24	2			N
VR7, 8	Semi-fixed Variable Resistor (Dolby Adjust) 5 KΩ (B)	EVLS3AA00B53	2			RS-610US
VR9, 10	” 500Ω (B)	EVLS3AA00B52	2			RS-736US
VR11, 12	Semi-fixed Variable Resistor (Record Level Adjust) 20 KΩ (B)	EVLS3AA00B24	2			RS-610US
VR13, 14	Semi-fixed Variable Resistor (VU Meter Adjust) 1 KΩ (B)	EVLS3AA00B13	2			RS-817S
	<u>CAPACITORS</u>					
C3, 4	Styrol Capacitor 120 pF	ECQS1121KZ	2			
C5, 6, 25, 26, 43, 67, 68, 91, 92	44, 45, 46, 47, 48, 55, 56, 61, 62,					
	Electrolytic Capacitor 10μF	ECEA16V10L	18			
C7, 8, 15, 16	Ceramic Capacitor 0.001μF	ECKD1H102MB	4			
C9, 10, 77, 78	” 0.0022μF	ECKD1H222KB	4			
C11, 12, 19, 20	Electrolytic Capacitor 33μF	ECEA6V33L	4			
C13, 14	” 47μF	ECEA25V47L	2			
C17, 18	Ceramic Capacitor 100 pF	ECCD1H101K	2			
C21, 22	” 0.001μF	ECKD1H102KB	2			
C23, 24, 51, 52	Mylar Capacitor 0.027μF	ECQM05273KZ	4			
C27, 28	” 0.012μF	ECQM05123KZ	2			
C29, 30, 79, 80, 206	Electrolytic Capacitor 1μF	ECEA50V1L	5			
C31, 32, 81, 82	Ceramic Capacitor 47 pF	ECCD1H470K	4			
C33, 34	Electrolytic Capacitor 100μF	ECEA6V100L	2			
C35, 36, 207, 208	” 100μF	ECEA25V100L	4			
C37, 38	” 3.3μF	ECEA25V3R3L	2			
C39, 40	Ceramic Capacitor 0.0015μF	ECKD1H152KB	2			
C41, 42	Styrol Capacitor 820 pF	ECQS1821KZ	2			
C49, 50	Mylar Capacitor 0.0056μF	ECQM05562JZ	2			
C53, 54	” 0.0047μF	ECQM05472JZ	2			
C57, 58, 63, 64, 71, 72, 85, 86	Aluminum Capacitor 0.1μF	ECAG25ER1	8			
C59, 60	Electrolytic Capacitor 47μF	ECEA10V47L	2			
C65, 66, 201, 202	Ceramic Capacitor 33 pF	ECCD1H330K	4			

Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
C69, 70	Mylar Capacitor 0.1 μ F	ECQM05104KZ	2			
C73, 74, 75, 76	Aluminum Capacitor 0.33 μ F	ECAG25ER33	4			
C83, 84, 89, 90	Electrolytic Capacitor 4.7 μ F	ECEB25V4R7L	4			
C87, 88	Mylar Capacitor 0.068 μ F	ECQM05683KZ	2			
C98	Electrolytic Capacitor 100 μ F	ECEA16V100L	1			
C203	Styrol Capacitor 0.0082 μ F	ECQS1822KZ	1			
C204	Mylar Capacitor 0.018 μ F	ECQM05183KZ	1			
C205	" 0.022 μ F	ECQM1223KZ	1			
C209	Ceramic Capacitor 0.01 μ F	ECKD1H103P	1			
C210, 211	Electrolytic Capacitor 220 μ F	ECEA25V220L	2			
C212	" 1000 μ F	ECEA25V1000V	1			
C213	" 1000 μ F	ECEA16V1000L	1			
C214	Mylar Capacitor 0.022 μ F	ECQM6223KZ	1			
	<u>TRANSISTORS</u>					
Tr1, 2, 3, 4	Transistor	2SC1327(S)	4			RS-610US
Tr5, 6	"	2SC644(S)	2			"
Tr7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22						
	"	2SC828(R)	14			"
Tr15, 16	"	2SA666H(R)	2			RS-676US
Tr25, 26, 27	"	2SC1347(R)	3			RS-610US
Tr29, 30	F.E.T.	2SK30AD	2			N
	<u>DIODES & RECTIFIERS</u>					
D1, 2, 7, 8, 11, 12	Diode	OA90Z	6			COMMON
D3, 4, 5, 6, 9, 10	"	1S1211	6			RS-610US
D15, 16	Rectifier	SIB0102	2			"
D17	Diode	EQA0108S	1			"
	<u>TRANSFORMERS</u>					
T1, 2	Output Transformer	QLA0349	2			RS-263US
T3	Oscillator Transformer	QLB0153	1			"
T4	Power Transformer	QLPN24ELEW	1			N

Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
	<u>COILS</u>					
L1, 2	Trap Coil	QLHM2001	2			RS-263US
L3, 4	Low Pass Filter	QLH2021	2			RS-610US
L5, 6, 7, 8	Choke Coil	QLH2008	4			RS-263US
	<u>SWITCHES</u>					
S1, 2	Slide Switch (Record/Playback Select)	QSS1110	1			RS-610US
S3	Lever Switch (Tape Select)	QST0041S	1			RS-263US
S4	Lever Switch (Dolby IN/OUT)	QST0016SB	1			"
S5	Slide Switch (Muting)	QSS2202T	1			Ⓝ
S6	Push Switch (Power ON/OFF)	ESB1134S23	1			RS-610US
S7	Leaf Switch (Motor ON/OFF)	QSB0169A	1			RS-263US
S8	Rotary Switch (AC Voltage Select)	QSR0005B	1			"
	<u>JACKS</u>					
J1, 2, 5, 6, 8	LINE IN/OUT, DIN Socket	Refer to E3	(5)			
J3, 4	Mic Jack	QJA0227	2			RS-715US
J7	Headphone Jack	QJA0228	1			RS-263US
	<u>PILOT LAMP</u>					
PL1	Pilot Lamp	XAMQ17P200	1			RS-276US
	<u>ELECTRICAL PARTS</u>					
E1	Record/Playback Head	QWY4107Z	1			RS-263US
E2	Erase Head	WY242Z	1			"
E3	Jack Board with J1, 2, 5, 6, 8	QGJM0014	1			Ⓝ
E4	Mic Jack Board	QGJM0013	1			Ⓝ
E5	Level Meter	QSL1050LN	2			RS-610US
E6	AC Power Cord	SJA231	1			SD Supply
E7	See-Saw Knob	QGT1242	2			Ⓝ
E8	Fuse 0.5 A	XBA1E05NR1	1			RS-610US
E9	Fuse Holder	QTF1032	1			"
E10	Jack Nut	QNQ1033	3			RS-275US
E11	3 P Lug Terminal	QJTM3011	1			Ⓝ

Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
E12	Cord Bushing	QTD1129	1			RS-254S
	<u>CABINET PARTS</u>					
G1	Top Panel Assembly	QYPM0006	1			N
G1-1	Cassette Lid Assembly	QYFM0024	1			N
G1-2	Cassette Lid Spring-R	QBNM003	1			RS-263US
G1-3	Cassette Lid Spring-L	QBNM004	1			"
G1-4	Cassette Lid Shaft	QNMN0002	1			RS-610US
G1-5	Stop Ring 3φ	XUC3FT	1			COMMON
G2	Wooden Case	QYWM0003	1			N
G2-1	Jack Cover	QGCM0002	1			N
G3	Push Button	QXBM0015	1			N
G4	Volume Knob	QGT1281K	2			N
G5	Rubber Foot	QKA1050A	4			RS-263US
G6	Squre Washer	QWQ1115	1			"
G7	Switch Mask	QBHM0007	2			N
G8	Sems Screw $\oplus 3 \times 8$	XYN3+C8RFXS	6			COMMON
G9	Screw $\oplus 3 \times 12$	XSN3+12FXS	5			"
	<u>ACCESSORIES</u>					
A1	Cassette Music Tape	QFT1TCJNAQZ	1			RS-276US
A2	Connection Cord-G	RP023A	2			COMMON
A3	AC Plug Adaptor	QJP0603S	1			RS-610US
A4	Instruction Book	QQT0824	1			N
	<u>PACKINGS</u>					
P1	Inside Carton	QPNM0073	1			N
P2	Inner Cushion-R	QPAM0006	1			N
P3	Inner Cushion-L	QPAM0007	1			N
P4	Dust Cover	XZB50X60A05	1			RS-610US
P5	Accessory Box	QPW1125	1			RS-263US

